

REMARKS

Upon entry of the present amendment, non-elected claims 5-18 will be canceled without disclaimer or prejudice to the filing of one or more divisional applications directed to the canceled subject matter, and claims 1, 3 and 4 will be amended, whereby claims 1-4 will be pending. Claim 1 is the sole independent claim.

While not expressing agreement or acquiescence with the rejections of record, claim 1 has been amended to include that the other surface of the deposited semiconductor layers is used as light emitting surface and there are no obstacles such as a sapphire substrate or electrodes on the surface. Support for the amendment to claim 1 appears in Applicants' originally filed application including page 4, beginning at the fourth line from the bottom of the page.

Moreover, claims 1, 3 and 4 have been amended to be more in accordance with idiomatic English and standard U.S. practice.

Reconsideration of the rejections of record and allowance of the application in view of the following remarks are respectfully requested.

Claim of Foreign Priority

The Office Action acknowledges the claim of priority and receipt of the certified copy.

Information Disclosure Statement

Applicants express appreciation for the Examiner's confirmation of consideration of Applicants' Information Disclosure Statements, filed April 24, 2006, by including an initialed copy of the Form PTO-1449 with the Office Action.

However, upon review of the initialed form, it is noted that JP 2000-196197 is not initialed. As no explanation is provided for the lack of initialing, it is assumed that the lack of initialing was inadvertent. Applicants are therefore submitting another copy of the form and request that the Examiner forward a completely initially copy with the next communication from the Patent and Trademark Office.

Drawings

Applicants express appreciation for the indication in the Office Action that the drawings filed January 24, 2006 have been entered and accepted.

Response To Restriction Requirement

The Restriction Requirement has been maintained with claims 1-4 being examined on the merits, and claims 5-18 stand withdrawn from consideration as being directed to non-elected subject matter.

In response to the maintaining of the Restriction Requirement, Applicants have canceled non-elected claims 5-18 while preserving the right to submit the non-elected subject matter in one or more divisional applications.

Response To Objection of Claim 1

Claim 1 is objected to because it is asserted that "VIA's" should be ---vias---.

In response, claim 1 has been amended as suggested by the Examiner.

Response To Rejections

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Publication No. 2003/0160258 to Oohata.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Publication No. 2002/0081773 to Inoue et al. (hereinafter "Inoue").

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication No. 2003/0160258 to Oohata in view of U.S. Patent No. 6,878,973 to Lowery et al. (hereinafter "Lowery").

In response to these grounds of rejection, Applicants submit that none of the documents of record teaches or suggests, as recited in Applicants' independent claim 1, a light-emitting device formed by depositing p-type and n-type nitride semiconductor layers, comprising:

- deposited p-type and n-type nitride semiconductor layers;
- semiconductor-surface-electrodes to apply currents into each of the semiconductor layers;
- an insulating layer which holds the semiconductor layers, said insulating layer comprising two surfaces; and

- mount-surface-electrodes provided on one surface of the insulating layer which is opposite to the other surface of the insulating layer where the semiconductor-surface-electrodes are made;

- wherein one of the semiconductor layers has a non-deposited area where the other semiconductor layer is not deposited;

- one of the semiconductor-surface-electrodes is built up on the surface of the non-deposited area;

vias are made in the insulating layer which electrically connect the semiconductor-surface-electrodes and the mount-surface-electrodes;

the semiconductor-surface-electrodes, the insulating layer, and the mount-surface-electrodes are built up in this order on one side of the deposited semiconductor layers; and

the other surface of the deposited semiconductor layers is used as light emitting surface and there are no obstacles such as a sapphire substrate or electrodes on the surface.

In contrast to the subject matter recited in independent claim 1, and further defined in the dependent claims, Oohata does not disclose "one of the semiconductor layers has a non-deposited area where the other semiconductor layer is not deposited". Oohata does not disclose a non-deposited area as recited in Applicants' claims. Moreover, one of the semiconductor surface electrodes cannot be built up on the surface of the "non-deposited area" by Oohata.

Oohata discloses electrode 5 existing on the surface of the outermost semiconductor layer. To the contrary, Applicants' independent claim 1 includes the other surface of the deposited semiconductor layers is used as light emitting surface and there are no obstacles such as a sapphire substrate or electrodes on the surface.

Oohata disclose via 7 which is not made on the semiconductor layers 1, 3, and discloses via 7 and insulating layer 4 existing on the other portion of the semiconductor layers 1, 2 and 3 in plan view. To the contrary, Applicants' claim 1 includes vias are made in the insulating layer which electrically connect the semiconductor-surface-electrodes and the mount-surface-electrodes; and the semiconductor-surface-electrodes, the insulating layer, and the mount-surface-electrodes are built up in this order on one side of the deposited semiconductor layers.

Accordingly, the anticipation rejection based upon Oohata should be withdrawn because Oohata does not teach each and every element recited in Applicants' independent claim 1 and further defined in the dependent claims.

Regarding the anticipation rejection based upon Inoue, Applicants note that Inoue discloses a light emitting device having sapphire substrate 30, and the back surface of the sapphire substrate is used as light emitting surface. To the contrary, Applicants' independent claim 1 does not include an obstacle, such as a sapphire substrate.

Inoue also discloses an insulating layer as protective film 39. However, the protective film 39 cannot hold semiconductor layers. Inoue also discloses electrodes 24, 25; however, these electrodes are microbumps and not vias.

Accordingly, the anticipation rejection based upon Inoue should be withdrawn because Oohata does not teach each and every element recited in Applicants' independent claim 1 and further defined in the dependent claims.

Regarding the obviousness rejection of claim 4, Lowery is merely utilized in the rejection in an attempt to establish obviousness of including phosphor on the surface of the semiconductor layer. However, whether or not one having ordinary skill in the art would have made the asserted combination, which Applicants submit would not have been made, such combination does not overcome the differences over Oohata. Therefore, the rejection of claim 4 is without appropriate basis, and should be withdrawn.

Accordingly, each of the rejections of record should be withdrawn, and the application should be allowed

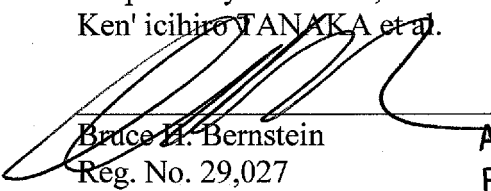
CONCLUSION

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejection of record, and allow each of the pending claims.

Applicants therefore respectfully request that an early indication of allowance of the application be indicated by the mailing of the Notices of Allowance and Allowability.

Should the Examiner have any questions regarding this application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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